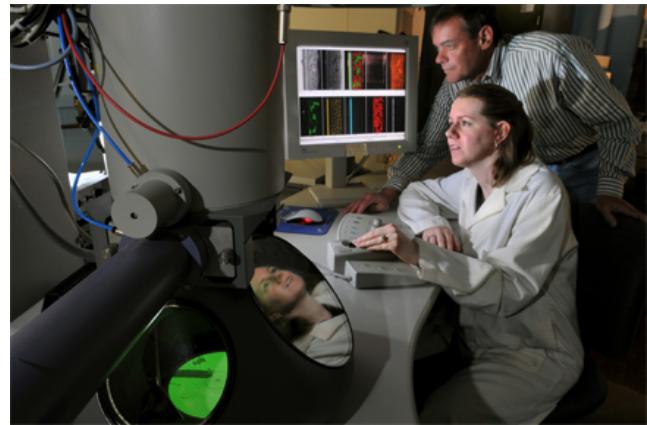


# FEI Tecnai F20ST TEM/STEM



## Instrument capabilities:

1. Instrument specifications:
  - a) Accelerating voltages: 80-200 kV
  - b) Schottky FEG emitter
  - c) Resolution (at 200 kV): ~0.24 nm point; ~0.1 nm line; probe size ~0.2-1 nm
2. Operating modes:

CTEM, STEM (BF/ADF, HAADF), CBED, SAED, light element XEDS, EELS, spectrum imaging, energy-filtered imaging (EFI), Lorentz magnetic imaging (LMI), electron holographic imaging (EHI), other computationally-mediated modes.
3. On-axis CCD camera: 16 Mp, 16 bits, 61x61 mm chip size.
4. EMC-owned specimen holders:
  - a) Double Tilt (+/- 40 degrees alpha, +/- 30 degrees beta):
    - with Be cup for XEDS
    - liquid nitrogen cooled (96 K) with Be cup
    - heating (1270 K)
  - b) In-plane magnetic field (tilt +/- 40 degrees alpha)
  - c) Liquid He cooled (tilt +/- 40 degrees alpha, rotate 360 degrees)
5. User-owned specimen holders: STM, AFM, nano-biasing, tomography

## Typical experiments (examples):

- Magnetic and electric field imaging
- Chemistry of nano structures
- EFI and/or spectrum imaging of heterostructures
- 3D elemental mapping
- *In situ* site-specific friction measurements
- High angular-resolution electron channeling electron spectroscopy